

Applicant: Steven Jeffrey Goldberg
Application No.: 10/656,495

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A wireless communication system for transmitting and receiving wireless communications using at least one beam comprising:

a plurality of wireless transmit/receive units (WTRUs);

at least one base station having at least one beam forming antenna wherein at least one beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension; and

a radio network controller (RNC) configured to generate tilt information for dynamically tilting the at least one beam considering ~~an affect~~ an effect that tilting a beam may have on other base stations to optimize transmission and allow for reaction discrepancies between the base station and at least one WTRU.

2. (previously presented): The wireless communication system of claim 1 wherein the beam is further dynamically adjusted in a horizontal dimension.

3. (previously presented): The wireless communication system of claim 1 wherein the base station generates control signals for dynamically adjusting the beam in accordance with the tilt information provided by the RNC.

4. (previously presented): The wireless communication system of claim 1 wherein the RNC generates control signals for dynamically adjusting the beam based on the tilt information.

5. (previously presented): The wireless communication system of claim 1 wherein the beam is tilted downward to reduce interference to and from another base station.

6. (previously presented): The wireless communication system of claim 1 wherein the beam is dynamically adjusted to account for variations in elevation between the WTRUs.

7. (previously presented): The wireless communication system of claim 1 wherein the beam is dynamically adjusted to break up null areas wherein transmission signals are not decodable.

8. (original): The wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in at least a vertical dimension.

9. (original): The wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in a vertical and horizontal dimension.

10. (original): The wireless communication system of claim 1 wherein the beam is adjusted to provide multiple signals along multiple paths to increase the data rate at which a receiving WTRU may receive data contained within the signals.

11. (currently amended): A method for dynamically adjusting beams to optimize transmissions within a wireless communication system, the method comprising:

a radio network controller (RNC) computing tilt information in real-time based on actual conditions in a wireless communication system considering ~~an~~ an effect that tilting a beam may have on other base stations under the control of the RNC; ~~and~~

a radio network controller (RNC) allocating general resources and adjustments permitting reaction discrepancies between the issuance of tilt information at the RNC and a base station; and

a base station adjusting at least one beam in at least a vertical dimension based on the tilt information.

12. (previously presented): The method of claim 11 wherein the tilt information is computed to adjust the beam to minimize interference to and from another antenna.

13. (previously presented): The method of claim 11 wherein the tilt information is computed to adjust the beam to account for variations in elevation of WTRUs.

14. (previously presented): The method of claim 11 wherein the tilt information is computed to dither the beam to break up null areas wherein transmission signals are not decodable.

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15. (currently amended): A wireless communication system for transmitting and receiving wireless communications using at least one beam comprising:

a plurality of wireless transmit/receive units (WTRUs);

a radio network controller (RNC);

at least one base station having at least one beam forming antenna wherein a beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension based on tilt information which is generated by considering an affect that tilting a beam may have on other base stations to optimize transmission and allow for reaction discrepancies between the base station and at least one WTRU.

16. (previously presented): The wireless communication system of claim 15 wherein information from the radio network controller and the plurality of WTRUs is used to compute the tilt information for dynamically adjusting the beam.